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Published in:
International Journal of Disaster Risk Reduction

DOI:
[10.1016/j.ijdrr.2019.101099](https://doi.org/10.1016/j.ijdrr.2019.101099)

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Document Version
Publisher's PDF, also known as Version of record

Publication date:
2019

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Imperiale, A. J., & Vanclay, F. (2019). Command-and-control, emergency powers, and the failure to observe United Nations disaster management principles following the 2009 L'Aquila earthquake. *International Journal of Disaster Risk Reduction*, 36, [101099]. <https://doi.org/10.1016/j.ijdrr.2019.101099>

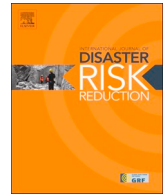
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Command-and-control, emergency powers, and the failure to observe United Nations disaster management principles following the 2009 L'Aquila earthquake

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ARTICLE INFO

Keywords:

Disaster risk reduction
Social dimensions of disaster
Disaster capitalism
Sociology of disasters
Disaster management
Community resilience

ABSTRACT

Using the disaster risk reduction paradigm and United Nations principles for post-disaster interventions, we analyse the actions of the Italian civil protection agency following the April 2009 earthquake in L'Aquila (Abruzzo, Italy), especially the use of a command-and-control approach and emergency powers. We consider the immediate response, the militarization of the emergency area, the establishment of red zones, the provision of emergency shelter and temporary housing, and the utilisation of disaster myths. We discuss the failure of the command-and-control approach to respect internationally-agreed principles of disaster risk reduction. The tragedy and multidimensionality of disaster impacts should induce disaster agencies to carefully consider the social dimensions of disaster in planning interventions. We found, however, that decision makers often adopt a 'command-and-control' approach and rely on emergency powers. These institutional arrangements mean disaster agencies implement top-down planning without transparency or accountability. There is no systematic approach to disaster risk reduction, community empowerment or resilience building. Post-disaster interventions are influenced by myths and misconceptions, and do not acknowledge the social dimensions of disasters. They increase dependency on external support, annihilate the potentialities of local communities, create further environmental and social impacts, violate human rights, while worsening vulnerabilities and risks. All this facilitates disaster capitalism and corruption, ultimately resulting into a second disaster.

1. Introduction

Various international declarations [1–4,95,96] have contributed to the evolution of a disaster risk reduction (DRR) paradigm that should be the basis of disaster management in all countries. As currently understood, this paradigm advocates building community resilience and supporting local communities to reduce local vulnerabilities and enhance capacities to better manage disaster risks and impacts before and after disasters. Good governance, the inclusive non-discriminatory participation of affected peoples, respect for human rights, consideration of environmental and social impacts of disaster interventions, and accountability and transparency, are all required to achieve desired DRR outcomes [2,3,5,6]. While this is widely accepted in disaster studies, there is little awareness of the DRR paradigm in much current disaster management practice [7]. As we discuss in this paper, post-disaster interventions continue to be implemented by national disaster agencies and international organizations using emergency powers, the command-and-control approach, and top-down planning. These

institutional arrangements are controversial and undermine achievement of DRR outcomes. We discuss how these institutional arrangements played out following the April 2009 L'Aquila (Abruzzo, Italy) earthquake, and establish that DRR principles were not observed during recovery operations.

In order to support local communities affected by disaster, local and national governments (or their disaster response organizations) and international disaster management organizations have the critical task of planning, implementing and managing post-disaster interventions. However, instead of conforming with the DRR paradigm and United Nations (UN) recommendations, the complexities involved often lead them to take a command-and-control approach to disaster management. The command-and-control approach has its roots in military theory [8–14]. In essence, it means the exercise of authority through a hierarchical chain of command emanating from a commanding officer [15]. In disaster management circles, it means more than this, it is an overarching worldview (or way of thinking) about post-disaster contexts and how disaster management should be implemented. Drawing

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<https://doi.org/10.1016/j.ijdr.2019.101099>

Received 28 October 2018; Received in revised form 5 February 2019; Accepted 18 February 2019

Available online 25 February 2019

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on a range of official sources [15–18], the key elements of this worldview can be described as follows. The complexity and chaos of disaster mean that regimented action is needed. Time is of the essence. A strong commander must take charge, and have a clear and unsaying vision of what needs to be done. To avoid decision paralysis, pre-defined schema and pre-determined action plans are implemented. The commander's plan must be clear and simple and effectively communicated down the ranks. Compliance must be enforced and there is no room for dissension. The affected community are overly-emotional, unprepared and untrained, and their autonomous behaviour is a threat to themselves and the wider community. They are not capable of providing useful knowledge or contributing to recovery operations. Feedback is unreliable and therefore should be ignored, and no interference to the plan can be tolerated. The deprivation of the liberty of local people is justified by the situation. Disaster management officers and volunteers are heroes who are saving people and property.

Although considered positively by many disaster management agencies, the command-and-control approach has been described as 'chaos-command-and-control' to imply that disasters are perceived by many agencies as situations of chaos that need to be controlled [12,14,19,20]. The approach has been criticized as being strict, rigid and centralised, with the potential to obliterate community resilience, extinguish community initiatives, and annihilate the capacities of local communities [14,20–22]. It rests on a set of myths and misconceptions that support its worldview, and leads to distorted outcomes [20,23,24]. A key critique is the failure of the approach to recognise the social dimensions of disaster and of post-disaster interventions. [25,26]. Drawing on the sociology of disasters [10–13], we define the social dimensions of disaster as comprising: the local social conditions (i.e. social vulnerabilities and risks) that contribute to the disaster happening; the social impacts on affected local communities; the social development goals that should be addressed through post-disaster interventions; and the social change processes that should be enacted in order to meet local people's needs, perceptions, desires and capacities, and engage and strengthen local community resilience.

Arguably, the command-and-control approach has taken hold in disaster agencies because most disaster management agencies have their origins in the military, and because of the ongoing high level of responsibility most countries accord for disaster management to military and para-military forces [27,28]. This has led to disasters being interpreted through a 'war approach' paradigm, and it being commonplace to use military concepts to discuss disasters [29]. This has led to the externalisation of disasters, with disasters being considered as external events and even as animistic, supra-natural forces [97]. A disaster is conceived as an enemy that is threatening community wellbeing and must be defeated, and from which local communities must be defended or protected. Thus, disaster response and emergency management must be organised through a precise chain of command that guarantees rapid response, efficiency, and success in defeating the enemy.

Over time, the command-and-control approach has been transferred to other domains including coalitions of governments (e.g. NATO), the expropriation of land for large infrastructure projects, and civil protection, humanitarian and peacekeeping operations [16,30–33]. New word constructions have been introduced, including 'consultation, command and control', and the scope of the approach has been expanded to include the role of political, military and civil authorities in political strategizing, crisis management, civil emergency planning, and in implementing critical infrastructure [17]. In general, the switch from civil defence to civil protection arrangements was not accompanied by any real intention to meet international DRR guidelines or develop effective community empowerment strategies to enhance the resilience of people and places at risk [34]. Despite these developments, the fundamental nature of the command-and-control approach adopted also by civil protection systems has not changed.

In a disaster context, the command-and-control approach is enacted

and legitimated by the declaration of a 'State of Emergency'. In most countries, including Italy, once a State of Emergency is declared, disaster management agencies operate as agents (surrogates, delegates) of the state (i.e. the national government), are granted emergency powers, and are typically covered by state secrecy provisions. Emergency powers are "special prerogatives that a government or a president can resort to in extraordinary situations such as war, insurgency, terrorist attacks, or other severe threats to the state, environmental calamities, serious industrial accidents, pandemics or similar situations that threaten a great number of lives" [35](p.6). With many countries having minimal specification of the conditions governing emergency rule in their legal frameworks, various concerns have arisen in relation to the exercise of emergency powers [35,36]. This is especially because a State of Emergency allows for "derogations from both human rights standards and alterations in the distribution of functions and powers among the different organs of the State" [36](p.3). The suspension of proper procedure and governance oversight means that there is high potential for improper actions (rent seeking, elite capture and corruption) in post-disaster contexts [37].

By reviewing international DRR principles and guidelines [1,2,4,5], we critique the use of emergency powers, the command-and-control approach and top-down planning used by the Italian Department of Civil Protection (DCP) in the recovery operations following the 6 April 2009 earthquake in the Abruzzo Region of Italy. We specifically consider how the command-and-control approach was applied in relation to the control of looting (jackals), the implementation of restricted areas (red zones), and in the provision of emergency shelter and temporary housing. We analyse how the top-down planning implemented by the Italian Civil Protection through the use of emergency powers and the adoption of the command-and-control approach facilitated elite capture and disaster capitalism [38–40] at national level, did not reflect local people's needs, priorities and desires, and ultimately represented for local communities a second disaster in the mid and long-term.

2. International principles and guidelines for disaster management

Although the Office of the United Nations Disaster Relief Co-ordinator (UNDRO) was founded in the early 1970s, arguably the DRR paradigm emerged with a 1982 report, *Shelter After Disaster: Guidelines for Assistance* [4] and became firmly established with the UN Decade of Natural Disaster Reduction in the 1990s. The 1982 UNDRO report was a policy and guideline about emergency shelter and post-disaster housing. It sought to address the mistakes of past interventions, especially those reported in relation to the 1976 earthquake in Guatemala, which UNDRO considered were typical of many post-disaster interventions: "too much aid was given away; too many of the houses constructed were merely of an emergency type; some organizations used large numbers of foreign volunteers; too much was done under pressure and without proper consultation so that the victims became mere spectators of the work carried out rather than participants; a lot of reconstruction work was undertaken without first consulting" [4] (1). The report identified 14 principles that should be observed in post-disaster interventions (see Table 1). Later revisions of the report largely maintained the original advice from 1982 [41,42].

Principle 7 of the 1982 UNDRO report recommended promoting awareness of the need for more focus on reducing the risk of future disasters and enhancing local preparedness. In response to this principle, the UN declared the 1990s, the 'Decade of Natural Disaster Reduction'. Since then, disaster management thinking has been evolving from a response-based war paradigm [29,97,98]; to a theoretical approach that focusses on the social pre-conditions of disaster and on building community resilience [5,6]. This shift was further promoted by the 1994 *Yokohama Strategy and Plan of Action for a Safer World*. Two key messages of the Yokohama strategy were that "disaster response alone is not sufficient, as it yields temporary results at a very high cost"

Table 1

The 14 basic principles of disaster management (synthesised from Ref. [4]).

Principles	Description
<i>1. Avoid anything best undertaken by survivors themselves.</i>	The primary resource in the provision of post-disaster shelter is the grass-roots motivation of survivors, their friends and their families. Disaster relief agencies must avoid duplicating anything best undertaken by the survivors themselves.
<i>2. Support and strengthen local governance and capacities.</i>	The correct and logical distribution of roles is crucial. Local authorities are the best qualified to decide who should do what, where and when. Rather than to usurp the role of local bodies, the priority should be to support and strengthen local capacity.
<i>3. The assessment of human needs is more important than any damage assessment.</i>	The rapid accurate assessment of survivors' needs is more important than a detailed assessment of property damage.
<i>4. The compulsory evacuation of survivors should be avoided.</i>	The compulsory evacuation of disaster survivors can retard the recovery process and cause resentment, while facilitating the voluntary movement of survivors according to their own needs, can result in positive outcomes.
<i>5. Local content in building emergency shelters should be encouraged.</i>	Disaster relief agencies tend to give an excessive priority to the need for imported shelter as a result of mistaken assumptions regarding the capacity of survivors, their resources and priorities.
<i>6. Reconstruction of damaged buildings should be a priority rather than a focus only on temporary solutions.</i>	The earlier the reconstruction process begins, the lower the ultimate social, economic and capital costs of the disaster.
<i>7. Preparedness is crucial to reduce post-disaster impacts.</i>	Post-disaster needs, including shelter requirements, can be anticipated with some accuracy. Effective contingency planning can help to reduce distress and homelessness.
<i>8. Reconstruction is an opportunity for risk reduction and reform.</i>	A disaster offers opportunities to reduce the risks of future disasters by introducing improved land-use planning, building methods, and building regulations based on hazard, vulnerability and risk analyses.
<i>9. The relocation of communities, whether temporary or permanent, should be avoided.</i>	The relocation of people is rarely feasible or appropriate. Services may be missing, it exacerbates harm and suffering, and prolongs recovery. If relocation is to be considered, it must only be undertaken with the informed consent of the community, is close by, the conditions are safe, the cost is reasonable, proximity to jobs, and services and utilities are available.
<i>10. Success in reconstruction is closely linked to issues of land tenure, government land policy, and all aspects of land-use and infrastructure planning.</i>	The land issue must be recognized as an integral part of post-disaster housing programmes. Social, environmental and economic goals must be respected in post-disaster interventions.
<i>11. Cash donations and the creation of dependency should be avoided.</i>	Cash grants are only effective in the short-term, and can create a dependency relationship between survivor and disaster relief agencies. It is advantageous for individuals and their community to participate in the financing of their own reconstruction.
<i>12. Avoid raising the expectations of affected local communities.</i>	It is important for disaster relief agencies not to exacerbate social and economic tensions by raising expectations in relation to the type of replacement housing that is provided.
<i>13. The success of post-disaster interventions strictly depends on accountability and the participation of local people.</i>	The most effective post-disaster interventions results from the participation of survivors in determining their own needs and planning accordingly. The successful performance of disaster relief agencies is thus dependent on their accountability to the recipients of their aid.
<i>14. Guidelines should be developed at the local level, by local people, modelled on international guidelines.</i>	Guidelines for post-disaster interventions should be developed at the local community level, formulated by local personnel according to local conditions (types of risk, culture, knowledge, economic base, social system). Such guidelines should be modelled on international guidelines.

and that “disaster prevention, mitigation and preparedness are better than disaster response” to achieve DRR and community resilience outcomes at the local community level [1](p.4).

Since the International Strategy for Disaster Reduction in 1999, the UN has advocated that DRR must be fully interlinked with social and environmental development [8]. Disaster management thinking expanded from mitigating disaster impacts after disasters, to also considering the reduction of social and environmental vulnerabilities and risks, and enhancing local community resilience. Effective local community involvement became a key component of DRR and disaster risk governance. International DRR thinking considered that it was crucial that local communities play a pro-active role in enhancing DRR at the local level.

The *Hyogo Framework for Action 2005–2015* [2] argued that increasing community resilience was crucial to enhance DRR and preparedness, and that resilience should be integrated as a social development goal in each disaster management phase, both before and after disasters occur. The Hyogo report emphasised the need for more “proactive measures, bearing in mind that the phases of relief, rehabilitation and reconstruction following a disaster are windows of opportunity for the rebuilding of livelihoods and for the planning and the reconstruction of physical and socio-economic structures, in a way that will build community resilience and reduce vulnerability to future disaster risks” [2](p.5).

The *Sendai Framework for Disaster Risk Reduction 2015–2030* [3]

remarked on the need for empowerment and inclusive, accessible and non-discriminatory participation of all relevant stakeholders, including local communities, academia, business and professional associations, and financial institutions. It acknowledged that DRR can only be achieved by paying special attention to people disproportionately affected by disaster. It emphasised the need for “investing in the economic, social, health, cultural and educational resilience of persons, communities and countries and the environment” [3] (11). The Sendai Framework considered the key priority areas to be: understanding risks; strengthening disaster risk governance; investing in DRR for resilience; and enhancing disaster preparedness for effective response and to build back better in recovery, rehabilitation and reconstruction. The Sendai Framework indicated that the recovery, rehabilitation and reconstruction phases are opportunities to ‘Build Back Better’ through integrating disaster risk reduction into development measures. Together with enhancing the resilience of communities, the UN recommends that post-disaster operations be better incorporated into the sustainable development of affected areas [3].

3. Methodology

This paper is part of a larger research project looking at the social dimensions of the L'Aquila earthquake at each disaster management phase. The overall project used a wide range of methods, including action research, auto-ethnography, ethnography, participant

observation, fieldwork discussions, fieldnotes, blogging, surveys immediately following the 2009 earthquake, document analysis of all relevant documents, a media analysis of reporting about the earthquake and its aftermath; 37 in-depth interviews with key informants; and over 250 interviews with people in local communities undertaken between 2009 and 2018. This paper is primarily about the response and recovery phases. It draws on participant observation in the tent camps in 2009, the media analysis of reporting during the recovery and reconstruction periods, and 14 formal, in-depth, retrospective interviews with key informants conducted in 2012 and 2017.

The primary author is an Italian citizen who was resident in the L'Aquila region for most of his life. He was present in L'Aquila city on the night of the earthquake and lived in the L'Aquila mountain province for the following seven years. As a young professional, he was well integrated in the L'Aquila community. In the days after the earthquake, as a reflexive scholar and practitioner, he began taking notes of his experiences and of what he witnessed.

The retrospective interviews were conducted in 2017 with a range of key local people who were ideal 'key informants' in that were knowledgeable about what happened in the L'Aquila region after the earthquake, and were willing to speak frankly with us. They included a councillor from L'Aquila City Council, the Mayors of two mountain villages, a lawyer representing the families of victims, three seismologists, and nine people who emerged as spokespersons for their various communities. All had been affected by the command-and-control approach. They were identified by using the lead author's networks, and by approaching people cited in the media. To avoid formulaic responses and to focus on the consequences of disaster management on local communities, it was deliberately decided not to interview people who were highly associated with: the leading political parties; the key protest movements; or the disaster management agencies. The interviews were recorded and subsequently transcribed. Informed consent was obtained for all formal interviews and general principles of ethical social research were observed [43]. Information was cross-checked (triangulated) with other sources where possible. All interviews were done in Italian. For this paper, extracts from the interviews were translated into English by the primary author, with some adaptation by the native English speaking co-author. In our translations, we have reflected the intended or implied meaning as would be said in English, rather than providing the exact literal translation.

4. The L'Aquila earthquake of 6 April 2009

The earthquake (6.3 Mw) devastated the regional capital, L'Aquila, and 56 surrounding municipalities, killing 309 persons, injuring some 1,500 and rendering some 70,000 people homeless in the affected area, which became known as 'the crater'. The extent of damage meant that a massive recovery operation was arguably necessary, and many elaborate schemes were implemented in the recovery, reconstruction and development phases [44,45].

A State of Emergency was declared immediately after the earthquake, and remained in force for three years, an extraordinary long period [35,36,44,45]. A large number of emergency and military personnel was deployed. A huge contingent of the world's media arrived and stayed for months. The government played to the media, including by orchestrating a State Funeral on 10 April 2009, which was broadcast nationally and internationally. The holding of the G8 summit in L'Aquila in July 2009, which had been relocated by Prime Minister Silvio Berlusconi from La Maddalena (Sardinia region) to L'Aquila at short notice, was another act of mediatization [46], and intensified militarization in the crater. Restricted areas (red zones) were established almost immediately and were still in force after ten years, excluding people from the centres of L'Aquila and surrounding villages. The recovery process has been severely criticised [44,45,47–50,99–101], including by an European Parliament inquiry [51], which was concerned about the misuse of the €493 million provided by the

European Union. The L'Aquila Prosecutor's Office, the National Anti-Mafia Department (*Direzione Nazionale Anti-Mafia*, DNA) (DNA, 2016), and the Parliamentary Commission of Inquiry into the Mafia [52] have also conducted inquiries into financial irregularities and mafia involvement. These reports confirmed the infiltration of mafia in post-disaster reconstruction in both public and private works. Since the earthquake, there have been many legal actions relating to allegations of fraud, corruption, bribery, inadequate public administration and mafia infiltration [7,45]. Ten years after the earthquake, L'Aquila is still a crater. The red zones are still in place, and over 10,000 people still live in temporary accommodation.

5. The immediate response

The earthquake happened at 3.32 in the early morning of Monday 6 April 2009. Immediately, local people helped each other. The devastation was extensive. Many buildings were damaged and public utilities and services were disrupted. Local service personnel (fire, police, ambulance) spontaneously went to their command posts. Given the extent of devastation, it did not take long for the authorities to realise there was a major problem and a significant response would be needed. The situation room of the Department of Civil Protection (DCP) in Rome went into action, with the leaders of Italy's multiple police forces, army, fire and other emergency services being called up (at 4.17), and the emergency coordinating body, *Unità di Crisi S3*, enacted. Emergency services personnel from all over Italy were called up and sprang into action. The timing of their arrival in L'Aquila largely depended on their travel distance, which in many cases was within an hour or two.

At 7.17, it was announced that a State of Emergency would be declared, and at 8.43 Prime Minister Berlusconi signed the official statement, which was subsequently formalised [53]. Guido Bertolaso, the Chief of the DCP, was appointed Delegated Commissioner of the Italian Government (*Commissario Delegato*) and charged with providing all forms of assistance and protection of the primary interests of the affected population (*ogni forma di assistenza e di tutela degli interessi pubblici primari delle popolazioni interessate*), as well as appropriate measures to bring the emergency to an end (*idonea al superamento del contesto emergenziale*) and to safeguard human lives (*salvaguardia delle vite umane*) (art.1, subpara.2, DPCM 6-4-2009). Later that day, Berlusconi appointed the Chief of the Italian Secret Services, Franco Gabrielli, as the new Prefect (representative of the national government) for the Province of L'Aquila (replacing Aurelio Cozzani who had retired a few days earlier). The Chief of the National Police, Antonio Manganelli, was also given the responsibilities of Chief of the local police.

Because most official buildings in L'Aquila were severely damaged, some senior DCP staff did a quick aerial survey by helicopter shortly after dawn (around 6.15) to assess which buildings were intact and could be used to house a local coordination centre. They decided that the most suitable building to use was the Italian Finance Police (IFP) school in Coppito, a suburb 5 kms from the centre. The local radio station played an important role in local communications. Local public officials and civic-minded individuals realised that they would need to coordinate and travelled to L'Aquila, being informed by radio that they should go to the IFP building [22].

The Minister for the Interior, who was also responsible for emergency services, Roberto Maroni, together with Manganelli, travelled to L'Aquila from Milan, arriving around midday. As soon as they arrived, Maroni announced that 1,500 fire officers and 200 police officers had been dispatched and that, in order to ensure efficient rostering, around 12,000 fire officers would be utilised. That evening on TV, the Minister for Defence, Ignazio La Russa, declared that arrangements had been made to ensure 1,000 military personnel would be present in L'Aquila at any time, and that over 3,000 would be deployed to ensure adequate rostering. Within 48 h of the earthquake, over 10,000 rescuers had registered as being present in L'Aquila, including volunteers and personnel from the fire service, police and army. By the end of April, a total

of 17,000 external service persons had visited L'Aquila [102]. By the end of August, the number had reached over 100,000 volunteers, primarily coming from other regions of Italy [54].

To facilitate coordination of the emergency, the DCP established a command unit called *Direzione di Comando e Controllo* (DICOMAC) (Directorate of Command and Control). According to DCP's online glossary [55], DICOMAC is a coordination unit for the operational components and structures necessary for civil protection, which is enacted in an affected area when considered necessary by the DCP in situations of a national emergency. Although DICOMAC was mentioned in Italian Disaster Management manual, which is known as *Il Metodo Augustus* (the Augustus Method) [18], it was likely first implemented with the 2009 L'Aquila earthquake. However, rather than being a co-ordination mechanism addressed to restore and support local governance functions, DICOMAC replaces or substitutes them. In this way, DICOMAC became the extraordinary government of the crater [22]. In L'Aquila, DICOMAC was internally structured according to its operational functions and by 7 geographically-dispersed centres of command called COMs. The COMs were led by civil protection personnel with the primary objective of managing emergency shelter. By 11 April 2009, some 170 tent camps had been established.

The rapid response of the emergency services is a feature of the command-and-control approach, and arguably one of its strengths [56]. However, the success of emergency response largely depends on and responds to bottom-up information from local people about what actions are needed and where assistance is required. The disaster studies literature reports that, even in times of extreme urgency, "average citizens, victims' friends, family, and neighbours perform the majority of search and rescue in the initial minutes and hours of a disaster. These people locate victims by listening for calls for help, watching for other signs of life, and using information to estimate where the trapped person may be" [8] (328). In L'Aquila, the many people who escaped unscathed went around providing help wherever they could, locating victims, helping each other and organizing themselves to rescue other people [22,103]. These collective actions were a major part of the search and rescue effort.

The State of Emergency accorded the DCP with emergency powers, specifically the power of injunction (i.e. to issue ordinances on behalf of the government) and the power of exception (i.e. derogation of ordinary rules and requirements, in effect giving the DCP the ability to act unilaterally). All actions, including emergency shelter and temporary housing provision, were carried out in the absence of ordinary restrictions and controls, and in disregard of all norms usually applied to public administration, including those relating to contracts, outsourcing, public procurement and prevention from mafia infiltration (art.3, OPCM n.3753). The DCP also had access to the Civil Protection Fund, giving it relatively unrestricted access to funding.

6. The jackals alert and other looters

During the morning of 6 April 2009, a SkyTG24 journalist interviewed the National Police Chief Manganelli by phone while he was travelling by car to L'Aquila. Even before arriving in L'Aquila, he said that he was already thinking about what measures to implement against 'jackals'. By jackals, he meant looters, which in his mind was a typical occurrence following disasters.

Technically, jackals are opportunistic omnivores of the dog family (genus *Canis*), which roam in groups and survive by scavenging. Although there is much classic mythology about jackals, (especially Egyptian mythology, for example the god, *Anubis*, who is the protector of graves and the guide of souls), in contemporary times jackals are associated with roving gangs of thieves or louts. In Italian, the word, *sciaccallo* (jackal), means an unscrupulous person who steals goods from other people's properties and/or turns other people's tragedies into their own advantage. *Sciaccallaggio* (jackalism, looting) refers to this opportunistic behaviour.

Soon after his arrival in L'Aquila, Manganelli immediately issued a press release to say that the first thing he saw on his arrival to the new temporary police station was the first people to be arrested for looting. This message was released by the national press agency (ANSA) at 15.09 [57], and it was published online by several national newspapers. At 15.47, this news was amplified by the President of the L'Aquila Province, Stefania Pezzopane, who said: "There are jackals around, even within a few minutes of the earthquake they were already looting" [58].

The next morning (7 April), in a clear snub to Manganelli, the Finance Police, which had responsibility for night-time monitoring of the city centre, issued a press release saying there had been no looting during the night [59]. Despite this, and notwithstanding that there had been no mention of looting in any news or police report during 7 April, the DCP issued a press release at 10.19 on 8 April saying: "Jackals are arriving from all over Italy" [57]. Later that day, two men were arrested for looting, which was widely publicised. At 18.43, however, they were declared innocent and it was accepted that they were inhabitants going back to their own houses to extract their own possessions from the rubble. Messages in the media were misleading: they rarely acknowledged the two people were innocent.

The position of the Italian government was that looting was a matter of major concern. It promulgated alarm about looting in order to introduce a suite of measures including: the militarization of the emergency area, with a large deployment of soldiers; the establishment of red zones; the coordination of 'hunting packs', i.e. squads of police who patrol the emergency area (with over 500 police being deployed for this purpose, in squads of 30 [60]; the introduction of a new crime, *sciaccallaggio* (looting), with severe penalties; a fast track procedure to hear alleged looting offences; and new powers to the DCP so that they could expel people from the crater. It was considered that all this was justifiable in order to make people feel comfortable while leaving their homes and belongings behind when they were sent to emergency accommodation.

Immediately after the State Funeral (10 April), Prime Minister Berlusconi gave an interview in which he said, amongst other things, that 4 people were arrested that day for looting and that they would stand trial the same day as a result of the new fast track procedure. He also said that 700 police officers had already been deployed to prevent further looting [61]. As it happened, at the fast-track trial, these four people were declared innocent.

In DRR circles, looting is regarded as one of the disaster myths rather than being a reality. While instances of looting are frequently reported in the media, considered analysis generally finds that instances of looting are rare, especially in the immediate aftermath of a disaster, and that those charged with looting are usually ordinary people legitimately going about their own business [20,23,62–68].

We interviewed two police officers (in 2017) who had been based in L'Aquila in 2009. In stark contrast to the official story about looting, these police officers told us that there were no jackals during the night of the earthquake, nor during the days afterwards. Even in the months following the disaster, only a few cases of looting were registered, most of which were false alarms.

A journalist with the newspaper, *La Repubblica*, Meo Ponte, accompanied the Carabinieri police while they were supposedly hunting jackals. From his accounts [60], we can read that the city centre was a 'ghost city', that there were no jackals, and that the only people stopped were local inhabitants going to their own homes. The police officer coordinating the hunting pack said: "We have never had a major problem with crime ... this is a city with a low crime index, some problems related to drug use by the university students, some robberies made by itinerant criminals, some family quarrels, that's all, nothing more. The local population has always cooperated with us. Here, they all know each other and a new face is easily recognizable." Ponte concluded his story saying that there was not even a shadow of a jackal.

Actually, on the morning of the earthquake there were many

unscrupulous characters ready to turn the L'Aquila tragedy to their own advantage. They were not that kind of jackal conceived by the DCP, they were influential entrepreneurs in the building industry. The night of the earthquake, they were not digging in the rubble to steal goods from damaged houses, they were lying comfortably in their beds in their mansions, hundreds of kilometres away, laughing and thinking about the great business opportunities the earthquake presented, certain they would be appointed to reconstruct the crater. This was clearly illustrated in a phone call at 15.34 on the day of the earthquake between two construction entrepreneurs, Pierfrancesco Gagliardi and his brother-in-law, Francesco Piscicelli, who had links to the government taskforce for the management of big events (*Struttura di Missione per gli anniversari di interessi nazionali*, which is known in Italy as the *Ferratella*). This phone call was published online by the national newspaper, *Libero*, on 11 February 2010 (slightly modified, author translation and interpretation) (the audio recording is available at <https://www.youtube.com/watch?v=WPYzHIP5huA>).

Gagliardi: You, in the Ferratella, should be interested in this earthquake, because [to get full benefit out of this opportunity] we need to start in top gear immediately. There is not an earthquake everyday!

Piscicelli: [laughing] No. There isn't, I know.

Gagliardi: [laughing] Oh, for heaven's sake, poor people.

Piscicelli: Okay, bye.

Gagliardi: [laughing] You understand, don't you? [what needs to be done to cash in]

Piscicelli: [laughing] Yeah, sure, I was laughing this morning at 3.30 in bed.

Gagliardi: [laughing] Yeah, me too. Okay, ciao.

Piscicelli: Ciao.

This recording was important in that it led to the uncovering of a network of criminal entrepreneurs with strong links to the government and the DCP. With this recording, prosecutors examining the awarding of contracts associated with the G8 summit could apply leverage to Gagliardi and Piscicelli, which led to them giving evidence about others in the ring. Significant identities were subsequently charged for crimes against the public administration, including: Guido Bertolaso (the DCP Chief), Diego and Daniele Anemone (noted entrepreneurs), Angelo Balducci (President of the Public Works Superior Council), Francesco Pittorru (retired General of the Finance Police, and former intelligence agent), Fabio De Santis (Superintendent of Public Works for the Tuscany Region), Riccardo Fusi (a building entrepreneur from Prato, Tuscany region) and Denis Verdini (politician). Although, Bertolaso was acquitted, and the legal action against Verdini and Daniele Anemone expired (statue-barred), the others were sentenced to several years in jail. Despite Bertolaso's acquittal, evidence of his association with Anemone was well established [69].

With the publication of the phone call, a Facebook group called *Quelli che a L'Aquila alle 3.32 non ridevano* (those who were in L'Aquila at 3.32 did not laugh) was established as a protest of indignation, with over 3,000 people signing up within 24 h. The group functioned as a sharing space where local people wrote about what they were doing on the night of the earthquake and about their concerns regarding the ongoing saga of the recovery process. It also worked as a platform for sharing news and information about events. For example, a demonstration was held in the L'Aquila city centre on 14 February 2010 to protest about the exclusion of people from the city centre and the slow process of reconstruction. About 300 people participated in the rally and the symbolic act of breaking-through the barriers of the red zone. As a way to advocate for participatory reconstruction, each protestor symbolically took a stone or brick from the rubble. The rally gained a

lot of media exposure, including a YouTube video by a local filmmaker, Luca Cococetta, called *L'Aquila è nostra* (L'Aquila is ours) [70]. This protest led to further demonstrations, including one held two weeks later, which attracted 2,000 participants, and to a movement called *Il popolo delle carriole* (People of the Wheelbarrows) [46]. The expression, *Io non ridevo* ('I was not laughing' or 'I did not laugh') became the battle cry of a wider thinking that criticizes opportunism and corruption in post-disaster situations [46].

7. Militarization and the creation of red zones

The deployment of thousands of fire, police, emergency and military personnel in the immediate aftermath of the earthquake reflected the Italian Government's strategy to ensure and demonstrate the response would be a success [44]. During the days and months following the earthquake, the L'Aquila landscape was dominated by the presence of a large number of people in uniform or hi-vis clothing, as well as a large number of emergency, police and military vehicles. The presence of military and para-military forces drastically increased during the G8, when even more severe restrictions and surveillance mechanisms were imposed. Many local people felt that they had been besieged, and this feeling was exacerbated by the militaristic approach implemented by the DCP in the tent camps. The DCP initially called the tent camps '*aree di ricovero*' (recovery areas), although '*campi base*' (basecamp), a military term, became widely used. They were renamed '*aree di accoglienza*' (i.e. welcome areas) for the G8 summit, although this term was seldom used by the inhabitants.

The militarization of the crater contributed to creating an unbearable environment. As one local person said:

"The most terrifying feeling I had ... was that L'Aquila absolutely seemed like a post-war setting rather than a post-earthquake territory. The most devastating characteristic was the total militarization – in that it dominated everything, the continued demand for identification documents, the very strong limitations on the movement of local people, and a very extensive control over the whole territory. These measures did not have any justifiable reason given that there was just an earthquake. I do not want to diminish the event, but I ask: *Why should an earthquake generate such a mass control mechanism on the local affected population?* ... There were continued identification checks, and police and military checkpoints everywhere ... They asked you thousands of questions ... They did not allow you to get in the basecamps where your friends were. ... While the DCP's written ordinances ... were raining down, many non-written ordinances were raining down too, ...such as, you can't go there, you can't do this, you can't bring that. In such a situation, you would often experience their arbitrariness. You could ask: *Who said that? Where is it written? To whom can I object?* [but you would never get an answer.] The pervasiveness of all this control left me stunned. As I said before, there was an earthquake, there wasn't a civil war such that you had to make some of the population responsible for the conflict and put them in open air prison camps!"

On 8 April 2009, the L'Aquila Mayor declared that, for public safety reasons, he had decided to shut down the city centre because of the risk of building collapse and looting. By creating exclusion zones (known as 'red zones'), the Mayor's ordinance n.73 banned public access to the L'Aquila city centre. Other ordinances established red zones in all villages in the crater. The red zones were implemented promptly. Initially, military personnel patrolled the perimeters, but within a few days, high fences were erected. For several years, platoons of armed soldiers maintained constant vigil in the red zones. No unauthorized persons were permitted to enter without being accompanied. Officers were available to accompany people who needed to go to their houses to obtain essential belongings. However, all this contributed to the worsening disaffection of local inhabitants and their sense of alienation and disenfranchisement.

While people were locked out from the historical city centres, many private building firms were carrying out interventions on public and private buildings in the red zones, including demolitions and shoring-up solutions. These measures were implemented under emergency procedures, without any engagement of local homeowners, and through direct assignments rather than following ordinary procedures. They were directly managed by the mayors and the technical directors of the local municipalities, who had been assigned the same extraordinary powers as the DCP. The State of Emergency lasted for three years, but certain decisions taken under this regime (e.g. about demolitions and safety measures) continued to be implemented for years afterwards through the same extraordinary procedures. Notwithstanding the militarization of the crater, there was a lack of monitoring of the implementation of safety measures, widespread corruption, and scandals around the shoring-up solutions and direct assignments.

The presence of the military was justified by the apparent need to make local people feel protected from the supposed risk of jackals. Among the first statements Prime Minister Berlusconi made after the earthquake was a paternalistic message that the State sympathized with the earthquake victims, that local people could leave the area and go on holidays to hotels along the Adriatic coast, with the army being present to protect their houses and belongings [71].

Politicians often consider that deploying the army is a way to display that they are taking charge in complex situations. However, by all accounts, the extent of the presence of the army in L'Aquila was excessive [44,45,72,104]; and visitors to L'Aquila considered that the military presence was absurd. Why were they there? They were certainly not there to protect people or property from jackals, but only as a display of power for political advantage. Arguably, the high visibility of state intervention in the immediate response functioned to disguise the lack of effort in preparedness and to thwart demands for reflection on institutional responsibilities. The heavy-handed use of military troops together with other command-and-control tactics meant that local people were locked out of their homes and their city or village for years, leading to homelessness and a loss of their sense of place. Conversely, building firms were left to conduct their business in the red zones unchecked and unsupervised.

8. Emergency shelter, evacuation, eviction

The extent of devastation quickly became apparent after sunrise on the morning of the earthquake. Over 30,000 buildings had been damaged, and around 70,000 people were homeless. By the afternoon of the 6 April, the DCP had identified a number of places (including sporting fields) where people could find refuge. The DCP started establishing tent camps at these locations, but the demand was great. On the night of 6 April (the evening after the earthquake) and for several nights following many people slept in their cars, caravans or other makeshift arrangements. Some 600 people slept in train carriages, which were made available by the Italian Railway Network at the nearby railway station. Some people with second houses or relatives elsewhere left the crater. In rural areas, many local communities made their own accommodation arrangements [22].

By the evening of the 6 April, the DCP decided that they would commence an evacuation of the crater, which they publicly announced by radio on the morning of 7 April. The local hotel association was contracted to arrange thousands of hotel rooms. The DCP established information points at various places around L'Aquila where people could obtain information about the housing options. At these information points, people who wanted to be rehoused were allocated to locations, sometimes up to 170 kms away. Busses were available for people who needed transport. To be assigned a hotel room, people had to go to the police station in the town to which they were allocated.

The DCP's radio message was intended primarily as an encouragement to leave. With people fearful of further earthquakes, many accepted this invitation, perhaps without regard to the consequences of

this decision. People were then forced to stay in emergency hotel accommodation for periods ranging from six months to over a year, something they did not expect and for which they were unprepared.

By the end of April, the crater population had become split between the tent camps near L'Aquila and the hotels along the Abruzzo coast. A local newspaper [73] reported that, of the 70,000 people displaced by the earthquake, 65,988 were assisted by the DCP, including: 23,168 accommodated in hotels; 6,956 in private accommodation in the other cities in Abruzzo; and 35,864 located in 170 tent camps across the crater.

The length of time people had to stay in hotels varied, with some being moved into the new temporary houses (from 29 September 2009 on), while others had to remain in hotel accommodation until May 2010 when sufficient housing became available. The people who had established themselves in the tent camps were evicted in September 2009, with the government having declared during the G8 that no one would remain in the tent camps after this date.

The cost of all this accommodation was phenomenal. The Abruzzo Region agreed with the regional association of hotels (*Federalberghi*) that the government would provide €47 per person per day [74]. One report [75] indicated that the total cost of the hotel accommodation was €180 million. We estimated that for the first few months after the earthquake, the cost of hotel accommodation was over €1.2 million per day. This was a huge financial benefit to the tourism industry, as a local councillor explained in an interview with us in 2017:

"With the L'Aquila earthquake, hotel businesses that were usually only open 4–5 months per year – from May/June to September/October – instead were kept open for 24 months consecutively hosting displaced people from L'Aquila for two years. All rooms were full! Everyday, lunches and dinners, lunches and dinners ... For hotel managers, this was a business that wouldn't happen twice in their life!"

The 170 tent camps required 5,643 tents, 101 field kitchens and 37 field medical centres [73]. Some tents were for 4 people, others were for up to 15 people. Within each camp, there was an eating area, kitchen, toilet block, and a recreational area. The DCP also provided food and water, health care, psychological support and social activities. The DCP directly engaged with service providers for the provision of equipment and consumables, and paid all costs. DCP contracts for food supply were mostly with non-local companies. Local produce was rarely utilised. Thus local agricultural production was affected, first by the earthquake and then by the lack of sales. Despite protest by some local producers, even milk and bread was imported. Consequently, after some months, the local cooperative milk factory, which was already in financial difficulties, went bankrupt with flow-on consequences for local farmers.

All DCP arrangements were arguably subject to state secrecy provisions. As a long-serving local councillor said:

I perfectly remember the discussions we [the Council] had the first years after the earthquake when, several times, we asked the DCP and its Chief, Bertolaso, to provide us with financial statements or a fair account of the money spent and decisions taken. I always heard the same formulaic answer, that "*the DCP's work is not subject to the Presidency of the Council of Ministers' control, much less to the local council's control*", just like in the Secret Services!

An exposé by the antimafia NGO, Libera [76]; revealed that there was gross mismanagement in the provision of services in the tent camps. For example, it determined that there was a surplus of around 1600 portable toilets. The cost of the tent camps was around €1 million per day [76]. A DCP report to the European Commission indicated that the total cost of the tent camps was €140 million and that the total cost of all emergency assistance for the first 6 months was €430 million [75].

The division of the population into basecamps and hotels along the

coast created social relationship difficulties for the affected people. People lodging in hotels said they were living as 'earthquake victims' (*terremotato*) in a place they did not feel was their own, far away from their hometown, relatives and work. While arguably this was comfortable for the first few days, as the months went by, they could not hide the discomfort, alienation and the discrimination they experienced, especially during summer when the service they received was different to that of the tourists staying in the hotels. Many felt as if they had been deported.

The situation in the basecamps was also unpleasant. They were perceived by some as being 'concentration camps' due to the high level of control. Some basecamps were very rigid, run by strict military personnel, some of which even conducted flag ceremonies twice a day. In many cases, access was denied to non-residents, and to gain entry inhabitants had to carry identity papers and present them on demand. There were differences between the DCP camps and the camps led by local communities. People living in self-organized camps in the mountain villages felt more joyful, happy, and proud [22]. An interviewee said: "We did not agree with the military management of the basecamps because you were forced to be like you were in a military barracks ... there were a lot of people that had to control and manage everything, and this prevented the earthquake victims from cooperating with each other". Another participant asked rhetorically: "How would it be possible to help in the kitchen if there were already 20 DCP volunteers working there? The problem was that there were too many volunteers from outside, and even if you wanted to help, it was not possible!"

Any public meeting that local groups wanted to organize in the camps were subject to DCP control. While there were DCP-led camp assemblies that provided information to residents, these were top-down information sessions, and people who made critical comments were often harassed and intimidated. Although there were social activities arranged by residents and by some cultural associations, around the end of May 2009, it was decided that all cultural activities had to be authorized by DCP staff. As a local councillor said:

"They were really quick to immediately censor whatever private initiative you wanted to organize in the basecamp. For example, even if you wanted to organize movie nights in the basecamp where you were living, the DCP officer-in-charge would tell you to go to DICOMAC to ask permission ... If they agreed, they then took over your initiative".

Life in the tent camps became institutionalised and was subject to routine, with a strict time schedule. The command-and-control approach heavily influenced people's emotions, attitudes and behaviours. An atmosphere of fear was created, especially through the 'jackals alert', which led local people to think and act as if there were enemies about. As explained by one interviewee:

"All these restrictions of a military kind in the basecamps, such as: getting in without leaving an identity document at the entrance was forbidden; getting out after 10 pm was forbidden; at 10.30 pm private tents had to be closed up. ... [These restrictions] were somehow supported by the population: people thought that it was right that the basecamps had to be closed at 10 pm because there were 'dangers', and then you discover that these 'dangers' were absolutely fictional. For example, in one mountain suburb ... in the little basecamp of 40 tents, residents got the absurd idea of establishing surveillance patrols to watch the basecamp at night. Thus, in a little basecamp of 40 tents with only local people, where nothing would go except only some wolves occasionally, at 4 am there would be a surveillance patrol of four to five local inhabitants patrolling their village. And this attitude, of course, was influenced by the climate the DCP had created".

Over time, the command-and-control approach contributed to changing residents' feelings, attitudes and behaviours. An interviewee

from a remote mountain village provided an interesting account. Due to the remoteness of her village, the DCP only arrived some weeks after the earthquake. Before they arrived, local people were self-organizing. When the DCP arrived, something radically changed, and the community-mindedness of the first weeks was extinguished:

"I remember that in the basecamp where I lived immediately after the earthquake, there was a wonderful climate until the DCP arrived. ... There was a climate of brotherhood. But with the arrival of the DCP assistance, everything changed. I perfectly remember the switch that happened. I don't know, perhaps people did not feel responsible anymore for the commons, and it began to be a rush to get the most from the DCP, a gold rush! Instead of cooperating, they began to look at each other with suspicion and jealousy".

The over-assistance of the DCP not only changed local people's feelings, attitudes and behaviours increasing their dependence, it served to encourage acceptance of DCP's rules and plans. A sense of totalisation was reported by one interviewee:

"[life in the tent camps] was like in a concentration camp ... I mean, they created a structure in which it was forbidden to discuss, it was forbidden to contest, it was necessary to obey. The DCP thought about everything: *Do you want a pair of shoes?* Tomorrow, the temporary outlet in the basecamp would open and you could get whatever kind of shoes you wanted. *Do you want wholemeal bread?* Tomorrow, the temporary outlet in the basecamp would open and you could get wholemeal bread. It was for free, everything was for free! *All we ask of you in return is that you must accept our rules!* Then we put in a bit of fear of the jackals, we say they can loot, and the population obviously feels the need to be protected and empathizes and adapts to this situation."

Building acceptance through providing assistance and creating dependency also helped build an uncritical "divinization" of the commander and his heroic actions. As the local councillor told us: "I remember when Bertolaso began to tour around the tent camps ... to make people feel the State's presence, he was welcomed like a hero. People were waiting 15 min in a queue to kiss his hand".

The DCP did not contribute to enhancing social cohesion, to the capacity of local people to autonomously build a common vision for their own future, or to develop a shared plan for their recovery. The vision that was mainstreamed was the DCP's vision, and the plan that was decided upon and implemented was the plan that the DCP had already decided to implement. The only decision the local population had to make was to accept or oppose the DCP's plan. This created conflict between those who agreed and those who opposed the plan. In contrast to the building of social cohesion that is a feature of place-based policies, inevitably the top-down imposition of plans always creates division [49,77].

With the Italian government's battle cry that was promulgated during the G8, "*From tents to homes within 6 months!*" when the 6 months were up and the temporary housing policies had failed to achieve the targets, the DCP evicted the people living in the tent camps. The tent residents were ordered to leave their tents for accommodation in hotels (most around 60 kms away) or to relocate to the modular buildings that had been established in the nearby military compound. This forced relocation created much resentment and protest, especially given that many people had made themselves quite at home in the tents by furnishing them with their personal belongings from their destroyed homes. For people sent to hotels, major concerns were the distance from their workplace and the breakdown of their social networks.

9. Temporary housing provision: the CASE project

It was obvious from the first day that reconstruction would be a long-term process and that a temporary housing solution would be needed to accommodate people for some years while reconstruction

took place. While this is perhaps normal following major earthquakes, what was surprising in the L'Aquila case was the hastiness of decision making, the lack of community engagement, the lack of any impact assessment or needs assessment, the nature of the solutions, how they were implemented, and their high cost. One of the options was called the CASE project, being an acronym for *Complessi Antisismici Sostenibili ed Ecocompatibili* (i.e. anti-seismic, sustainable and eco-compatible complexes). The concept of this project was that it would provide temporary housing for the earthquake victims while reconstruction occurred, but be a permanent facility to enable future use. The buildings were intended to be durable, sustainable, comfortable, homely, and safe [78]. Superficially, this sounds like a good idea, but the project was highly controversial and problematic [44,50].

The project ultimately resulted in 5,736 apartments in 185 buildings on 19 locations, providing housing for some 15,500 people. The European Union contributed €350 million (42% of the total cost [51], with the remainder paid by the Italian Civil Protection Fund. The project was conceived, approved and implemented at great speed. It was the brainchild of Gian Michele Calvi (who incidentally was a member of the Major Risk Commission [7], the then President and founder of the research foundation, Eucentre, a not-for-profit organisation that promotes seismic risk mitigation from an engineering perspective. Calvi launched the idea on the national intellectual TV talk-show, *AnnoZero*, on 9 April 2009, i.e. only a few days after the earthquake. Within one week, his idea was politically endorsed. Ordinance OPCM n.3755 of 15 April allocated €300,000 to the Eucentre to develop the idea (OPCM n.3755, art.12). A public announcement that the DCP would proceed with Calvi's plan was made on 23 April, and was implemented in law on 28 April (art. 2 of the law decree 39). Construction started at the end of May and the first houses were ready for occupation on 29 September 2009.

The L'Aquila Council was excluded from decision-making around the CASE project and its implementation. All decisions around the project and its locations were made by the DCP together with the L'Aquila Mayor and two professionals the Mayor had appointed through the use of emergency procedures. It was only by reading the local daily newspaper that the local councillors learnt the CASE project was being implemented. As soon as they could, the local councillors convened a council meeting, their first formal meeting after the earthquake, with the intention to reclaim their right to have a say in decision-making, especially regarding the disaster management activities being carried out by the DCP. As a local councillor explained:

"In June 2009 when we learned from the newspaper about the decision concerning the CASE project, we convened the first Council meeting after the earthquake. It was held in the presence of the DCP Chief, Bertolaso, who had been formally invited by the council to attend. The councillors who convened the meeting had the objective to say to Bertolaso: *Look, there is a local council! The management of the territory should not be taken away from the council.* There were many local committees being established and claiming that the city should have a say in the decision making process, especially about the temporary housing solutions in general, and the CASE project and its locations in particular. However, Bertolaso did not come to hear this, he came to the council meeting only to tell us about what he did, what he was doing, and what he was going to do. His message was clear, his communication was efficient. There was no possibility for the local council to discuss and decide with the DCP, or even to be heard about what local people's needs and perspectives were, not at all! To summarise, Bertolaso came to that meeting with an attitude of: I decide, I command, and I am now kindly informing you about what I have already decided to do in the coming weeks".

The local councillors convened a second council meeting in August in order to have a say about the allocation criteria for the CASE apartments, but again with no result. As the local councillor explained:

"In August, ...we convened the second council meeting with the objective to discuss the allocation criteria in order to decide about the families who would be accommodated [in the CASE project] ... However, the Council's final resolution was discarded by the DCP. We never did find out why. First, they had an algorithm called 'Corallo', then one called 'Bizantino' for the selection of beneficiaries. When we asked the DCP through a formal freedom-of-information request what the allocation criteria adopted by the DCP were, Bertolaso answered me verbatim, once again: *The DCP's work is autonomous, from the Presidency of the Council of Ministers' control, even more so from the L'Aquila Council, therefore we do not need to provide you any document with criteria*".

The CASE buildings had anti-seismic foundations, using seismic isolators and cement 525 (a kind of cement normally used for dams). The massive size of these foundations was criticized as being excessive in relation to the comparative light-weight nature of the buildings [79]. Despite the over-engineering, many of the isolators turned out to be faulty. Given concerns about potential mafia involvement and misuse of public funds, there was some monitoring of contracts, which led to some isolators being tested and found to be faulty:

"On request of the Aquila Prosecutor's office, the seismic isolators were tested by a laboratory in San Diego (California). The seismic isolators produced by the company ALGA Spa failed the test. The seismic isolators had previously been tested by the laboratory Eucenter of Pavia G. Calvi. Mr. Calvi was also the director of CASE in the DPC. Hence, this is a classic case of controlled-controller and of conflict of interests." [51]; p.9, sic, errors in original)

There were also other concerns with the CASE project. Works to the value of €560 million were commissioned by directly engaging contractors rather than going through formal public tenders [80]. Several building firms linked to the mafia were appointed [51,76]. The cost of the CASE project was excessive. However, establishing the exact costs is very difficult, with inconsistent reporting across sources. The European Court of Audits [81] reported that the total cost was €597 million, equivalent to over €1,648 per square metre. This would be 158% more than normal market cost for a prefabricated apartment [81]. Søndergaard [51] reported that the total cost was €809 million. In an official report about the costs of post-disaster interventions, the Italian Minister for Territorial Cohesion from 2011 to 2013, Fabrizio Barca, indicated that the total cost was €833 million [82].

The CASE project transformed the landscape. Most CASE buildings were built in mountainous and rural areas around L'Aquila City, creating urban sprawl, some in clear contradiction to the European Landscape Convention [99,105]. In some cases, the buildings were erected near farms creating hygiene issues and conflict between farmers and the new residents. Land for the buildings was expropriated, causing much resentment and ill-feeling amongst the original landowners and conflict because of differences in compensation and perceptions of fairness. Some 6,000 land parcels were expropriated, including over 100 ha of farmland, causing irreversible damage to local agriculture [48,100]. No rural livelihood restoration plan was implemented. Although owners of urban land allotments were compensated adequately, it was reported to us that some farmers were not satisfied with the compensation amounts and/or that they experienced delays in being paid.

Some CASE buildings were not connected to the sewerage system and discharged raw sewage from approximately 3,500 people directly into the Aterno, Vera and Raiale rivers [44,83]. This created impacts for water quality, local agricultural production, and on local people's health [84,85].

Implementation of the CASE project began before any needs assessment was conducted. The implication of this was that, even though they were originally planning to construct around 4,000 apartments, it was later established that this was nowhere near enough, catering for

less than one third of the displaced population. Another 1,700 apartments were then added to the plan. A survey concerning housing needs was only conducted in August 2009, well after all temporary housing solutions were already being implemented. The survey sought to identify the needs and preferences of people concerning the various accommodation options: including several temporary housing projects; apartments rented by the State; and State contributions to autonomous accommodation. The survey revealed that the CASE project was insufficient and that 8,000 people would have to continue to live in hotels until other housing solutions would be ready [86]. Because other forms of transitional housing (e.g. prefabs, container homes, caravans) were not considered, the CASE project had the consequence of prolonging people's stay in emergency accommodation.

There was much concern about how the locations for the CASE buildings were selected [105]. The locations were primarily chosen by the two technicians appointed by the L'Aquila Mayor. Given the lack of input into location decisions by other stakeholders, it is not surprising that many problems arose with the locations selected. We were told by various professionals that the locations were inappropriate because: (1) the buildings were not close to shopping centres and other public facilities; (2) they created transport problems by shifting the loci of populations creating traffic bottlenecks because of changes in traffic flows; (3) public transport routes became over-extended; (4) the supply of electricity, gas, water and sewerage was problematic because of the shift in population centres; and (5) the potential future reuse of the buildings was limited because they were not close to public institutions like the university or the hospital.

The allocation criteria used to select people for CASE apartments were not transparent. There was no attempt to preserve previous neighbourhood relationships and the social disintegration produced by the emergency accommodation was exacerbated. Due to the lack of stated criteria, many people had a sense of injustice. The majority of people did not like living in the CASE apartments and experienced feelings of anomie, homelessness, loss of sense of place, and depression [106]. People described life in the CASE buildings as living in a permanent state of temporariness, living in a cemetery, in a shoe box, or in impersonal apartments all in a row.

The dis-functioning of the CASE buildings has been regularly reported in various media sources. Of particular note was the collapsing of balconies in several buildings, with potential risk to occupants. In 2014, the use of the balconies in 800 apartments was banned [87]. Consequently, a court case was commenced in 2017 against 37 builders (ongoing at the time of writing). Other reported problems include: the poor quality of construction materials; leaking pipes and water seepage; numerous deficiencies creating dangerous situations; fires due to faulty electric systems; and the improper use of flammable materials [51]. Construction deficiencies in some buildings were so great that between April and December 2013 residents submitted 1,200 requests for maintenance [88]. To date, 500 apartments have been declared unfit for habitation, and several buildings will be demolished [89]. In one mountain community, Arischia, construction of its buildings was so poor that in 2015 all residents had to be relocated elsewhere, leading to hardship, stress, and psychological trauma [90]. In 2017, a further 70 families in L'Aquila had to be relocated [91].

Despite claiming to be sustainable and eco-compatible, the CASE apartments had many shortcomings, not only in construction but also in energy use. The DCP initially paid the bills for energy and water. From March 2010, the L'Aquila municipality had to pay these costs. For various reasons, including an upcoming election, the Mayor neglected to act on the bills received, thus accumulating a massive debt for the municipality. In 2011, the electricity provider, Enel, considered the municipality to be in arrears and increased the unit cost of electricity as a penalty and to cover the increased risk. After the 2012 election, the municipality issued bills for past consumption to all inhabitants, with some individual bills exceeding €5,500. There was a huge protest by residents regarding the lack of transparency in the billing

arrangements, and the unjust way in which the bills were calculated [92].

Although originally called an 'Italian Miracle' [48], the CASE project was a disaster in its own right. This project was not based on any community needs assessment and did not reflect the actual housing demand. The CASE buildings were realised without any consideration of environmental or social impacts or their future sustainability. Thus, far from being a temporary housing solution, the CASE project became a permanent liability for the local communities who have to carry the burden of its environmental, health and social impacts. Within 10 years of their construction, some 10% of the CASE buildings have been declared unsafe. On 10 June 2017, the outgoing local Mayor, Massimo Cialente, who in the beginning agreed with the DCP plan, declared that it was better to demolish all the CASE buildings due to their high maintenance costs and structural deficiencies. There has been ongoing discussion of this idea [89].

10. Comparing the command-and-control approach in L'Aquila against international principles

In the stories above, we highlighted how emergency powers were used, how the command-and-control approach was applied, and how top-down planning was implemented by the DCP in the post-disaster response and recovery in L'Aquila, specifically in relation to the control of looting (jackals), the implementation of restricted areas (red zones), and in the provision of emergency shelter and temporary housing (the CASE project). We argue that it is reasonable to expect that the Italian DCP should have been familiar and complied with international DRR principles and guidelines that were applicable at that time. Therefore, it is appropriate to assess their recovery operations against the DRR paradigm, and specifically against the principles highlighted in the UNDRP report, *Shelter After Disaster: Guidelines for Assistance* [4], which we outlined at the beginning of our paper (see Table 1). Based on our analysis, it is obvious that none of the principles were respected in the L'Aquila situation (see Table 2).

The UNDRP [4] report was partly based on an analysis of the 1976 Guatemala earthquake. It identified many mistakes in how disaster response and recovery were implemented. Sadly, all the mistakes mentioned in the 1982 UNDRP report were repeated in L'Aquila in 2009. Specifically:

- too much aid was given, mostly to the detriment of local people;
- too many of the houses constructed were of an emergency or temporary type, with little consideration given to the reconstruction of local people's houses;
- large numbers of external volunteers were used, leading to a sense of invasion, and suppressing the ability of local people to enact their own resilience;
- too much was done under the guise of time pressure, without proper consultation with local people. This meant that the affected people became mere spectators of the work carried out rather than participants in the process of recovery and reconstruction. It also meant that many of the interventions were a complete failure and/or totally inadequate for local needs;
- a lot of work was undertaken without involving local people, which meant that opportunities for re-development were lost, many local businesses became bankrupt, and people felt excluded.

Instead of being informed by international DRR guidelines, Italian disaster management is informed by its Augustus Method [18], which embodies the command-and-control approach, and advocates that the commander-in-charge needs to formulate a disaster management plan that should be strongly communicated and quickly implemented. The Augustus Method also describes how community acquiescence must be acquired to create obedience and thwart unwanted behaviour from the affected people [22]. Being focussed only on how the plan is to be

Table 2

The extent to which international disaster management principles were followed after the L'Aquila earthquake.

Principle	Review of the extent to which the principle was applied
1. <i>Avoid anything best undertaken by survivors themselves.</i>	INADEQUATE. In L'Aquila, emergency shelters were provided by relying on a massive amount of external resources both for the hotel and tent camp solutions. No initial assessment was conducted to consider the accommodation needs of affected local people or their capacity to autonomously find refuge. The management of the tent camps relied on a large number of external volunteers, whose efforts tended to suppress the involvement of local people.
2. <i>Support and strengthen local governance and capacities.</i>	INADEQUATE. Through the declaration of the State of Emergency, some local leaders were given emergency powers. However, this did not strengthen local governance. By giving emergency powers to them, local governance, which was already weak, was made worse, corruption arose, and local community participation was completely absent.
3. <i>The assessment of human needs is more important than any damage assessment.</i>	INADEQUATE. Damage assessment of public and private buildings began immediately. However, a community needs assessment was only conducted in August.
4. <i>The compulsory evacuation of survivors should be avoided.</i>	INADEQUATE. Although the DCP evacuation policy was allegedly only an encouragement for people to leave the crater, essentially it was compulsory in that anyone who left could not return because of delays in providing temporary housing and the lack of alternatives. Later, there were forced evictions when the government decided to close down the tent camps.
5. <i>Local content in building emergency shelters should be encouraged.</i>	INADEQUATE. There was only limited utilisation of local content, all of which was of dubious appropriateness, and was subject to elite capture, rent-seeking and misuse of funds.
6. <i>Reconstruction of damaged buildings should be a priority rather than a focus only on temporary solutions.</i>	INADEQUATE. There was a strong focus on temporary solutions, which obscured any ability to start reconstruction of people's houses. Where reconstruction of buildings had commenced in the city centres, it was primarily on buildings with cultural heritage value rather than ordinary people's houses. Furthermore the temporary solutions consumed most of the available funding to the tune of billions of euros.
7. <i>Preparedness is crucial to reduce post-disaster impacts.</i>	INADEQUATE. There was no evidence of any preparedness even despite the earthquake swarm affecting the area since October 2008.
8. <i>Reconstruction is an opportunity for risk reduction and reform.</i>	INADEQUATE. In the planning for reconstruction (which has largely not yet commenced) there has been very little consideration of building-in DRR. The temporary housing (CASE project) was intended to be sustainable and earthquake resistant, however this project was very poorly implemented and arguably its alleged positive features were little more than rent-seeking.
9. <i>The relocation of communities, whether temporary or permanent, should be avoided.</i>	INADEQUATE. People were relocated vast distances, with communities being fragmented. No attempt was made to allow social networks to be relocated together. For some villages, this resulted in total social disintegration, the destruction of village life, alienation and a loss of their sense of place.
10. <i>Success in reconstruction is closely linked to issues of land tenure, government land policy, and all aspects of land-use and infrastructure planning.</i>	INADEQUATE. Government ordinances became a means for overriding the ordinary regulatory framework for land use and infrastructure planning. The emergency powers were used to subvert good planning practice and policies.
11. <i>Cash donations and the creation of dependency should be avoided.</i>	COMPLEX. In Italy, people do not privately insure their houses and there is a social expectation that any loss is covered by the State. Thus, this principle is difficult to apply. However, the state solicited cash donations from the public, private sector and from other nations. This fund was badly managed. Furthermore, some of the collected monies were dispersed as loans with an interest of 4%, which created resentment among local people and many donors felt cheated.
12. <i>Avoid raising the expectations of the affected local communities.</i>	INADEQUATE. Local people's expectations were raised and not met in many ways, especially in relation to the reconstruction process. What was framed as reconstruction actually was either the construction of temporary housing or temporary safety measures. The hosting of the G8 also led to raising expectations with promises made by many countries not being met.
13. <i>The success of post-disaster interventions strictly depends on accountability and the participation of local people.</i>	INADEQUATE. The arrangements established by the authorities abused emergency power provisions normally understood around the world. State secrecy was used to avoid accountability and transparency. No attempt was made to allow for the participation of local people. Decision making was centralised, and local governance arrangements were overthrown.
14. <i>Guidelines should be developed at the local level, by local people, modelled on international guidelines.</i>	INADEQUATE. Italy seems to be unaware of international understandings of DRR. There were no local guidelines.

executed, the Augustus Method and the command-and-control approach do not even consider that response and recovery actions might create social and environmental impacts, or violate human rights. Nor do they reflect on how response and recovery interventions can contribute to reducing vulnerability and disaster risk, or enhance local community resilience. In the Augustus Method, there is no reference to community resilience, the DRR paradigm, or the United Nations disaster management principles (despite the UNDRO report having been published in 1982). It is also surprising that it has not since been updated.

The Augustus Method and the command-and-control approach are ridden with false assumptions, myths and misconceptions that hinder proper understanding of the social dimensions of disaster[22,26]. These assumptions can be grouped into two sets. The first set concerns local affected communities: they are shocked victims who need assistance; recovery operations are complicated and local people do not have knowledge or capacities to contribute usefully; they are inclined to panic; any initiatives they take and any spontaneous behaviour are a

potential threat to themselves and to the proper functioning of post-disaster operations; there will be lawlessness and looters; and people will abandon their public responsibilities and duties in favour of personal interests. All up, the people in the disaster zone must be carefully controlled and kept out of the way. The second set concerns time pressure: time in post-disaster operations is a matter of life and death, and, therefore, the quicker, the better; consideration of social and environmental impacts is a waste of precious time; the involvement of the public is time-consuming and pointless; normal laws, governance oversight and local democracy retard emergency operations; and to be efficient there needs to be a single 'man in charge' who has authority to make quick decisions.

In L'Aquila, the playing-out of these disaster myths was highly evident in the mainstream media and in the way the DCP conducted its operations. The DCP clearly held onto the disaster myths, acted as if they were real, promulgated them in order to justify its interventions, and manipulatively used them in order to advance disaster capitalism at national and local levels. The jackals alert created a climate of fear and

suspicion, rather than empathy. The local population was framed as shocked and unable to cope, which led to over-assistance and paternalism creating rent-seeking opportunities and a gold rush, rather than promulgating social responsibility. The idea that people had nothing to contribute because recovery operations were perceived as being just technical facilitated elite capture rather than cooperation and capacity building. The State Funeral and other commemorative rites (e.g. those in front of the student dormitory where 8 students died) were seized upon as opportunities to be orchestrated for mediatization and the outpouring of feigned grief [93]. They were hijacked to build the approval of the commander-in-charge, rather than to build trust and cohesion in the community. The militarization of the emergency area and the creation of red zones contributed to exclusion, homelessness, powerlessness, and social disarticulation. The DCP paraded their interventions with extensive propaganda, leading to the divinization of the DCP chief, and to building uncritical consent for its disaster management plan. Shortly after the earthquake, a plan for the provision of temporary housing (the CASE project) was designed and implemented without any engagement of the local affected population. The hastiness of its implementation was justified by the alleged need to act quickly. There was no consideration of environmental or social impacts and human rights issues, or concern for proper governance. All up, the recovery operations carried out during the State of Emergency, which lasted three years, represented a second disaster for local people.

In the stories we analyse in this paper, it was evident that the DCP's interventions during the response and recovery stages were implemented using specific institutional arrangements: the command-and-control approach, emergency powers, and top-down planning. Use of these arrangements was justified as being an efficient means to avoid delay in the implementation of post-disaster interventions. However, these arrangements were highly vulnerable to elite capture, and allowed implementation of recovery interventions without considering the needs or priorities of the local communities, or any systematic community resilience-building strategy [107]. However, rather than efficiency, there were delays, wastage and massive social and environmental impacts. The post-disaster operations led to very poor outcomes in the short, medium and long term. They were opportunities for rent-seeking and elite capture by external suppliers and influential building firms, which led to over-engineered solutions reflecting their interests rather than the needs of affected local people. Although around €22 billion was spent on post-disaster interventions in the L'Aquila crater [94], ten years after the earthquake, the red zones still exist, and over 10,000 people still live in temporary accommodation.

11. Conclusion

The international DRR paradigm, which is supported by several United Nations agreements, spells out the key principles that should be followed in disaster management. It advocates for a community empowerment approach to disaster management and development, in which the capacities of local communities to manage disaster risk, learn from past failures, reduce vulnerability, and enhance resilience are strengthened. In this paradigm, disaster management must not only be the business of the commander, it is primarily the business of local communities who suffer the negative social impacts of disasters. Local people must be engaged and empowered in every phase of disaster management so that they can better manage disaster risks and impacts, and enhance their resilience and wellbeing.

Rather than compliance with the international DRR paradigm, the disaster management practice of the DCP in the aftermath of the L'Aquila earthquake reflected a command-and-control approach. Although the command-and-control approach was widely rebuked well before the 2009 earthquake, the Italian DCP claimed the approach was effective and kept on applying it. The command-and-control approach together with the promulgation of disaster myths, the use of emergency powers and the implementation of top-down planning, constituted the

mechanism through which the DCP implemented its disaster management operations.

The promulgation of the disaster myths by the DCP undermined their and wider community understanding of the social dimensions of disaster. The use of the command-and-control approach led to elite capture, which undermined recognition of local community needs, priorities and desires. The implementation of top-down planning did not take into account the social and environmental impacts created by the planned interventions, nor their mid to long-term sustainability. It was negatively influenced by rent-seeking and over-engineered solutions, and undermined any effective engagement of local people in the design and implementation of recovery operations. Finally, the emergency powers granted by the state allowed post-disaster interventions to be carried out in the suspension of normal laws of democratic governance, and in the absence of transparency, accountability or proper public procurement procedures. Overall, the promulgation of disaster myths, the command-and-control approach, top-down planning, and the use of emergency powers were the belief system and institutional arrangements that constituted the mechanism through which the DCP's disaster management operations resoundingly failed to meet international principles of disaster management.

Many questions are raised by this paper. Why is there ignorance of United Nations recommendations and the international DRR paradigm? Why does the command-and-control approach have such a strong foothold in disaster management agencies? How can the disaster myths be countered? How can a better understanding of the social dimensions of disaster be mainstreamed in disaster management practice? How can disaster management agencies become more willing to accept bottom-up and participatory approaches? How can community resilience be harnessed in post-disaster operations?

In post-disaster situations, there are no enemies to defeat, and only in emergency rescue activities is time truly a matter of life and death. Even in rescue situations, the best way to implement effective action is by engaging and supporting local people already helping their family, friends or neighbours trapped in the rubble. There is no justification for disaster management practice to be conducted on the basis of a command-and-control approach and not be accountable, transparent, reflect the needs and priorities of local communities, or to carefully consider the social and environmental impacts and human rights concerns associated with post-disaster interventions. Alternatives to command-and-control must be developed to enable empowerment of local affected communities, enhancement of their wellbeing and resilience, and to respect international DRR principles.

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